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ABSTRACT

This study was conducted in order to determine the kinds of knowledge third grade teachers need to teach an effective unit and to determine the relationship between content knowledge and classroom performance. The research focused on the subject matter areas in which three student teachers believed they were most and least confident. Data for this study consisted of written comprehensive unit plans, classroom observations, and transcribed interviews collected over a 4-month period during the student teaching experience. The study compared one student teacher knowledgeable in science and social studies, who could use education coursework to tie together content knowledge and pedagogy, and two student teachers with little knowledge of the topics and concepts they were to teach in physical education, art, and social studies. The results of the study suggest that an informed knowledge of student teachers' abilities in planning and teaching can result in preservice training wherein students are helped to: (1) integrate content knowledge and content specific pedagogical skills; (2) identify critical concepts and principles within the content; (3) see the relationships among the elements; and (4) apply this learning in a school setting. Fifty pages of tables, a list of 28 references, and appendixes containing the "System for Teaching and Learning Assessment and Review" and interview questions are included. (LL)

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Assessing the Relationship Between Reflective Practice, Content Knowledge, and Teaching Effectiveness of Student Teachers

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Assessing the Relationship Between Reflective Practice, Content Knowledge, and Teaching Effectiveness of Student Teachers

Introduction

In an effort to respond to calls for reform in teacher education, researchers have recognized the need to study the process of becoming a teacher. As a more complete understanding of what teaching requires is gained, traditional views of teacher education have changed. It is no longer believed that successful completion of a series of courses will produce a competent teacher. Teaching is a complex, unpredictable task requiring sound judgement, reflection, and numerous on-the-spot decisions. Over the past decade, researchers have gathered convincing evidence to suggest that teaching requires an understanding of learning, learners, and the subject matter. For example, Shulman and his associates (Shulman, 1986; Gudmundstottir, 1987) have identified sources of knowledge which teachers use during planning and teaching. According to Shulman, a teacher's understanding of content knowledge and pedagogy combine to allow a teacher to transform subject matter so that it is comprehensible to students.

As part of the reform movement of the past decade, the Louisiana Teaching Internship Program (LTIP) at Louisiana State University has accepted the challenge to improve the preparation of prospective teachers in the state. Recent research and development projects sponsored by the LTIP include a content synthesis of eight large-scale performance assessment instruments developed in southeastern states (Logan, Garland & Ellett, 1988), establishment and verification of a framework of generic, effective teaching behaviors (Logan, Ellett & Garland [Phase 2], 1989), development of the System for Teaching and learning Assessment and Review (STAR) (Ellett, Loup, Chauvin, 1990), and a descriptive analysis of teaching performance for a sample of student teachers (N=63) from six universities in Louisiana (Ellett, 1989). Data from the pilot research with student teachers yielded 204 hours of observation and provided clear evidence that the performance of prospective teachers was far below what was needed to be an effective teacher. These findings suggested a need for continued study of student teachers in Louisiana with the goal of being more precise in describing the reasons for the strengths and weaknesses in

planning and subsequent teaching performance. Thus, it was considered helpful to examine in a more detailed way how a small group of student teachers conceptualize the proactive and interactive phases of teaching. As a continuation of a pilot study of student teaching initially funded by the Louisiana Board of Regents for the 1988-89 school year, this study focused on contrasting the knowledge underlying the planning and teaching performance of three student teachers. This research was designed to study the role of subject matter knowledge in planning and teaching. Data collection began by having subjects select two content areas, one in which they believed the content knowledge acquired in the subject area was above what was needed to inform their teaching and one in which they believed the level of content knowledge was minimal and perhaps inadequate. It was hypothesized that differences would be evident for the two units planned by each student teacher and the differences could be attributed to the use and adaptation of content knowledge.

Purpose

The purpose of the study was to determine the kinds of knowledge third grade teachers believe they need to teach an effective unit and to determine the relationship between content knowledge and subsequent classroom performance. Several researchers have suggested that teachers must have a thorough understanding of subject content before teaching it (Clark & Yinger, 1979; Clarridge, Stein, & Berliner, 1988; Ringstaff, 1987). Stein, Baxter, Leinhardt (1988) stress that while empirical studies seem to call for subject matter knowledge for all teachers, the typical elementary teacher must teach several subjects and cannot be expected to become an expert in all fields. Baxter, Richert, & Saylor (1985) note that the level of content knowledge influences conceptions on that particular subject. Further research indicates that in planning, teachers focus primarily on the content to be taught (Peterson, Marx, & Clark, 1978). If this is indeed the case, then a teacher's content knowledge for a subject to be taught affects both planning and teaching.

This research focused in a detailed way on the subject matter areas in which three student teachers believed they were most and least confident. It was hoped that a more clear understanding could be developed of how a teacher's conception of what it means to teach a

particular subject influences what is taught (i.e. planning) and how it is taught (i.e. on the job performance). It should be emphasized that the study focused on individual student teachers, not on their teacher preparation programs. The STAR framework requires that assessors make decisions about content accuracy and emphasis. For example, there are indicators which call for judgments about whether or not the teacher emphasizes the value of topics and the essential elements of content knowledge. The present study combines quantitative data from the STAR with qualitative data from a series of interviews to shed more light on the role of subject matter knowledge in elementary classroom settings. By combining interview data with STAR performance data a more complex description of the content and structure of knowledge planned for and imparted to students is possible. By comparing patterns of pupil responses to observable interactions in actual lessons, some determination can be made about the degree of consistency between assessors' decisions and students' perceptions of the learning environment. There were several questions which guided the research reported in this paper:

1. Do teachers who vary in confidence about subject matter content plan different kinds of lessons?
2. Do these teachers differ in how they conceptualize and discuss their plans?
3. Do they perform differently in the classroom?
4. Do students of these teachers perceive teaching and learning in different ways?

Method

Data for this study consisted of written Comprehensive Unit Plans (CUPS), classroom observations, and transcribed interviews collected during the student teaching experience. Data collection covered a period of four months during the 1989-90 school year.

Subjects

Three student teacher volunteers from a major teacher education program in Louisiana were involved in this study. All participants in the study were elementary education majors. All had

completed course requirements prior to the semester of student teaching. A basic description of coursework completed is shown in Table 1. Each teacher was assigned to a self-contained third grade class. A brief description of each of the three student teachers follows.

Candy

Candy attended elementary and secondary schools in the public educational system and then entered college in the field of nursing. She decided to change her major to elementary education in her sophomore year, indicating a desire to help students learn. She came from a background where both parents and other family members chose teaching as a profession. Candy's composite score on the ACT was 23 and her overall GPA was 2.8. The school to which Candy was assigned for student teaching was a K-3 city school with an ethnically mixed student population.

Janet

Janet was a married student with a three year old child. She always wanted to become a teacher, even though there were no teachers in her family. She noted a desire to be in a position of authority. Janet attended a private school for her elementary education and a parochial school for her high school education. Her composite ACT score was 15 and her overall GPA was 2.8. The school to which Janet was assigned for student teaching was a rural K-12 school. The majority of her students were from middle socioeconomic backgrounds.

Millie

Millie was a married student and had always wanted to be a teacher. She made reference to teacher as "mother" in having a desire to nurture students. She attended public schools for her elementary and secondary education. Millie's composite ACT score was 21 and she had an overall GPA of 2.4. She was assigned to a city school comprised of grades K-6 for her student teaching. This school's student body was mostly of middle socioeconomic background.

Data Collection

At the beginning of the student teaching semester, the researchers met with the three subjects and discussed content areas in which they might be asked to develop unit plans to teach during the student teaching experience. Then, each student teacher was asked to identify the subject matter in which she had attained the best understanding and felt the most confident. Likewise, the content area with the least understanding and confidence was identified by each student teacher.

Instrumentation

The STAR (Ellett, Loup & Chauvin, 1989-90) is a comprehensive, classroom-based system for assessing teaching and learning that consists of 140 assessment indicators that operationalize 23 Teaching and Learning Components. Each of these components is classified under one of four STAR Performance Dimensions: I) Preparation, Planning and Evaluation; II) Classroom and Behavior Management; III) Learning Environment; and IV) Enhancement of Learning. An example of organization of the STAR assessment framework can be found in APPENDIX A.

The STAR assessment model requires assessors to begin with an independent review of a Comprehensive Unit Plan (CUP) prepared by the teacher for a five-to-seven day unit of teaching and learning activities. The assessment indicators comprising Performance Dimension I (Preparation, Planning and Evaluation) are assessed prior to subsequent classroom observations of teaching and learning. The CUP assessment is followed by three "announced" classroom observations for the full period of a lesson during the time frame covered by the CUP. The comprehensive unit plans written by the three teachers were independently scored by three trained assessors using criteria in the STAR.

The STAR represents a comprehensive system for assessing key elements of the learning environment, is more than a teacher evaluation instrument, and renews a child-centered focus in the classroom-based assessment of teaching and learning (Ellett, 1990). The STAR was developed in response to tow legislative mandates in Louisiana: 1) the Teaching Internship Law (1984) and 2) the Children First Act (1988). It builds on some 10 to 15 years of efforts of other states to identify and assess elements of effective teaching reflected in the extant process/product literature

(Brophy, 1985; Porter & Brophy, 1986). An initial assessment framework was developed for the STAR based upon a content synthesis of assessment items derived from eight other state systems (Ellett, Logan, Garland, 1986; Logan, Garland & Ellett, 1988). This synthesis was considered a "baseline" for the subsequent development of STAR assessment indicators and a variety of additions were made to enhance the teacher assessment field. The STAR focuses not only on indicators of effective teaching, but, also, and most importantly, on indicators of student learning. Thus, the STAR has been developed in Louisiana in a way that moves the teacher assessment field forward in terms of "what" is measured within the context of a state mandate targeting the periodic, renewable certification of all teachers.

The validity of the STAR has been investigated through a variety of sources. Studies (Ellett, Naik & Logan, 1990; Ellett, Chauvin, Loup & Naik; Naik, Hill, Lofton, 1991) have been completed to verify the assessment indicators and Teaching and Learning components as important elements of effective teaching and learning, free of bias, job-related, and as essential for making certification and internship program decisions. The criterion-related validity of the STAR has been investigated using indices of student engagement in learning, measures of student perceptions of psychosocial elements of the learning environment and student achievement as criterion variables (Ellett, Loup, Chauvin & Naik, 1990; Chauvin, Loup, Claudet, Ellett & Lofton, 1990). Additional construct validation studies of the STAR have been made using a series of factor analyses of large sets of STAR assessment data (Ellett, Loup & Chauvin, 1990; Loup, Chauvin, Ellett & Naik, 1990). Considered collectively, the results of investigations of the validity of the STAR are supportive of its quality as a comprehensive classroom-based measure of effective teaching and learning.

In addition to validity investigations, the reliability of the STAR has also been investigated. Findings of two generalizability studies (Teddlie, Ellett & Naik, 1990; Ellett, Loup, Chauvin, Claudet & Naik, 1990) suggest that the STAR and the STAR assessment process is a reliable assessment procedure that can differentiate teachers over occasions of assessment, assessor "types" and assessment indicators.

Planning Data

Each student teacher was asked to plan two units, one in a "high confidence" subject area and one in a "low confidence" subject area. The subject of "high confidence" represented an area in which the teacher felt she was most knowledgeable in and the subject identified as "low confidence" was representative of an inadequate background of knowledge. Three different subject matter areas were chosen as high knowledge units. Candy chose Science, Janet physical education, and Millie art. All three subjects chose social studies as the low knowledge unit. Oral and written explanations were made in a group session, detailing what was needed in each comprehensive unit plan. Each unit was the original work of a 5-7 day lesson plan for one class and included the key elements as outlined by the STAR (Ellett, Loup & Chauvin). The key elements are: a group description, goals and objectives, teaching methods and learning tasks, allocated time and content coverage, aids and materials, supplemental aids and materials, homework, formal assessment, student performance data, and state, district and school curriculum requirements.

Interview Data

To study how student teachers conceptualized planning and teaching, each subject was interviewed at the beginning of each unit. Each interview session ranging from 60 to 90 minutes was taped recorded and later transcribed. The purpose of the interview was to determine the concepts, ideas, and facts the teachers wanted their students to learn and more specifically to determine what role subject matter knowledge plays in planning and teaching. A teacher's knowledge should influence what is included in a unit plan and how the information is taught in the classroom. Thus, it was posited that there would be differences in the content of planning and teaching for the two units selected by the teachers. One represents an area in which the teacher has a good background of knowledge and the other is representative of a poor background. The interview questions were designed to gather background information on the teachers as well as their subject matter preparation, how they conceptualized their units, how they planned to teach core concepts, how content was sequenced and what the essential elements of the unit were. A

complete list of interview questions for student teachers is included in APPENDIX B.

To study students' perceptions of the lesson taught, five children were randomly selected each day to be interviewed. The interview questions for students were designed to gather information on what they perceived to be the content of the lessons taught by the student teacher. A complete list of interview questions for students is included in APPENDIX B.

Responses to the interview questions by teachers and students were audiotaped and transcribed for analysis.

Performance Data

To assess strengths and weaknesses in the teaching performance of the three student teachers, the procedures required for the Louisiana Teaching Internship Program were simulated for each planned unit. Three trained observers made one observation each during each of the six units. After all observational data were recorded, assessors worked through the STAR assessment manual and made decisions about the "Acceptability" of each assessment indicator using the indicator statements, clarifications in accompanying "Annotations," and a set of explicit decision making rules. In the STAR, each assessment indicator is judged as either "Acceptable," or "Unacceptable." In arriving at scores for each Teaching and Learning Component, dichotomous assessment decisions for each assessment indicator are summed over indicators, assessors and assessment occasions. A copy of pages from the STAR assessment manual for the Teaching and Learning Component of TIME is included in APPENDIX A.

Data Analysis

Descriptive statistics were completed for STAR Teaching and Learning Components. Typed protocols of teacher interview data and student interview data were examined line-by-line and commonalities were identified and summarized. Highlights of the planning, interview and classroom-based assessments are provided in the section that follows.

Results

Planning data collected through the semi-structured interviews were transcribed and commonalities are highlighted. Tables 2 and 3 present a summary of percentages of acceptable assessment decisions for Performance Dimension I (Preparation, Planning, and Evaluation). Results for each STAR Teaching and Learning Component on the CUPS for the "low" and "high" confidence areas are highlighted. Student perceptions of lesson content collected through student interviews were examined and prevalent conceptions are summarized. Classroom observation data are summarized in tables 4 and 5 which provide percentages of acceptable assessment decisions for each assessment indicator for each STAR Teaching and Learning Component for Performance Dimensions 2 through 4. Results are highlighted for each Teaching and Learning Component.

Planning Data

Interestingly, physical education and art were identified as high knowledge areas but after the interviews it became clear that these teachers believed that these subjects could be taught by anyone who had childhood experiences in these areas. For example, when Janet was asked about the source of knowledge for teaching physical education she responded:

> I guess from growing up being real athletic and sports oriented. I did everything from diving and swimming to gymnastics and cheerleading. I ran track, played baseball and basketball. I just love sports.

When Millie was asked how and where she acquired the knowledge to teach art she said:

> I got a lot of it from books, but I also just remember from when I was a kid and things I've done over the years. I just kind of absorbed knowledge over the years.

Candy, on the other hand, reported that she acquired the knowledge to teach science from her coursework. In her own words Candy said:

> I had good science teachers. I went to the lab school and we got to go to the lab a lot and conduct all kinds of experiments. In college I got a lot from the nursing curriculum. I majored in nursing before changing to education and that helped.

Candy also referred to prior experiences as a source of knowledge. As a child she was curious about many aspects of the environment and learned through play. For example she said:

> I remember one time trying to fry minnows with a magnifying glass. The ditch was our play area. We watched tadpoles turn into frogs and we caught crawfish.

Tables 2 and 3 present the quantitative scores on the CUPS for the low and high confidence areas for the three subjects. In Performance Dimension I (Preparation, Planning, and Evaluation), The STAR Teaching and Learning Component I.A., Goals and Objectives, the percent of the maximum score ranged from a high of 50% for Janet and Candy to a low of 22% for Millie in the low confidence area of Social Studies that was chosen by each of the participants. In the unit planned for areas of high confidence, scores ranged from a high of 61% (Janet) to a low of 28% (Candy). While Janet's and Millie's scores increased for the high confidence unit, Candy's scores decreased by 22%.

When asked the difference between goals and objectives these student teachers generally replied with similar responses such as:

> The goals are just broad things that after it's through, that years from now, hopefully, they will remember.

> The goals are very broad and the objectives may not be remembered after ten years, but the goals they should. Hopefully the goal will stay with them.

> Goals are priorities that give you an overall picture. Objectives are when you pinpoint exactly what skills you want that child to learn.

> Goals are more general and through mastering the objectives they will attain their goal.

> Goals are long term. You want them to still remember not everything we did and not everything we said, but for instance, that there's a nation of people called Indians.

However, when asked about developing the instructional objectives, these student teachers admitted knowing what they wanted their students to be able to accomplish, but had trouble writing this in an objective form that would accommodate the range of students' needs and abilities. For example, Candy admitted for her first unit:

> I didn't know too much about them (students). So I hope they (objectives) apply. I have learned the students that really need a lot more help and can't think on a higher level. There are quite a few. So I really don't know how I'm going to get around that because without telling them, they really can't come up with things on their own.

On her second Comprehensive Unit Plan, she addressed the same concerns.

> I tried to choose things that I thought they could do. Some of the things that I wanted them to do were too much above their level or too babyish. First I would have them to write a story about this. But now I know some of them have a hard time writing paragraphs. So I know they can't write a story. I've tried things and they failed. I at least know not to do that again. I guess through trial and error.

Janet experienced the same kinds of frustrations in planning for a class of students with different needs and abilities.

> I didn't know much about the students because we didn't have a structured physical education class. I observed them on the playground at recess and lunch. I can't say that I knew.

Millie expressed the idea that a variety of activities sufficed to accomodate the needs and abilities of students. The idea of goals and objectives became lost in her reply and she focused on the ability to succeed in a fun way. For example, she stated:

> I have a very definite line as far as, not intellect, but ability. I chose a lot of art activities, a lot of hands-on that makes them almost as equal as I can get them. Just because a child takes a test and makes an "F" that shouldn't be the only criteria that would judge this child by. I have a lot of craft activities for the children to be able to grade them on.
>
> There are varied number of objectives in there and that's good because some of my kids are very capable of cutting out a circle, but you put a crayon in their hand and they are lost. And some of the kids are just the opposite. They're very capable of holding crayons, scissors baffle them...the same thing with handwriting. Some of my children write better than I do and some of my kids need a lot of help and a lot of practice. Art is a fun way to accomplish all of the objectives and not realize that you are working towards something, that you are improving yourself.

When asked questions concerning objectives that students had mastered prior to the unit of study and objectives that may follow the unit of study, a variety of responses occurred. Candy was somewhat more focused on specifics while Millie approached the question with an attitude of just "wait and see" what comes up. Janet was more general in her perception about what should follow.

> Candy: They have used several things with maps. We have had some map activities and I can see that they worked with maps a lot. I'll just have to wait and see and I'm sure they will let me know if they don't understand something.

> As far as objectives that would follow, they could see another area and how it started and what it's like today, maybe in a different country.
>
> In the science unit, there is so much that soil relates to, plants, animals, burrows, earthworms. I would like them to learn more about other uses for soil. I would like them to come back into the classroom later and say, "Ms. Crow, listen to what happened and we talked about this and this is something else about soil." Or maybe bring in articles that relate in some way to soil.
>
> Janet: We're using distance scale in map skills so I think they will be able to read a map and get from one location to another on their own by using a map. Probably they will learn how the community has modernized itself. They will learn more about changes a community goes through to modernize and where we'll go from here to the future.
>
> Millie: Basically, they need to know how to follow directions in art. I think just about any art unit could follow. I think with an art lesson to include things they haven't used before. You have to listen and wait for things to happen and you have to treat it with respect and extend the art lesson with something that they are not familiar with.

Another difference between subjects was evident in their abilities to plan teaching methods and learning tasks. For example, in the low confidence subject (social studies) in Teaching and Learning Component 2.B (Teaching Methods and Learning Tasks), Janet and Candy scored at about 50% of maximum while Millie was only at 11%. However, in the high confidence units, each student teacher scored slightly above 50% of the maximum. In both units of study Candy's percentage for indicator number 5 (Activities are planned that engage students in a range of thinking skills as appropriate) was 100% of the maximum as compared to Janet's 66% and Millie's 17%. It is of particular interest to note that indicator number 6 (Remedial and enrichment activities for specific students are planned as needed) received an unacceptable decision for each student teacher on both units by all three assessors. When asked about accommodating the needs of these individual students, comments focused on activities planned for the class and not much thought was given to content-related supplemental or enrichment activities for individual students. Candy replied with the following response:

> Hopefully the variety of activities I have will help because I feel like if you can try to reach them in different ways, like discussion or written activity, somewhere you will reach all of them. If some finish early, we've got journals that they can write in. They also have their library books. That will handle that. If not, we have some different art activities that they need to finish.

As shown in tables 2 and 3, Candy's scores for Teaching and Learning Component I.C. Allocated Time and Content Coverage were higher (75% for both social studies and science) than those of Millie (25% and 8%) and Janet (16% and 25%). In the high confidence subject areas (p.e., art, science) the main difference was Candy's ability to translate knowledge into a logical sequence for teaching. Several responses to the interview questions provide support for the quantitative differences between the three teachers in knowledge of subject matter. For example, when teachers were asked to describe, for the high confidence subject area, an ideal student, an ideal class, and the important goals they wanted their students to achieve, several differences were evident. Candy's responses were filled with comments regarding subject matter knowledge while Millie and Janet more often mentioned effort or fun. The following are the exact words of the teachers.

Candy wanted her students to be thinking about the content of the lesson.

> I hope they will think about what soil really is... that it is not just "dirt", but it has different parts.

She describes the best students as those who are interested in gaining more subject matter knowledge.

> The best students always want to know more about what I'm talking about and the weaker ones ask questions for clarification or about directions. Sometimes the best students share with the class some knowledge they have.

The ideal class is described by Candy as one where students are actively involved in learning.

> If we are talking about the water cycle, I will have them evaporate the water and let them see it form into droplets. Things they can see are important.

Janet and Millie, on the other hand, wanted their students to be involved and have fun.

> Janet: I want everyone to cooperate and interact with each other.
> I want them to be courteous to each other and not make fun.
> I want them to think about other people and not just themselves.

When asked what the students need to have previously learned in order to accomplish the objectives in the physical education unit, Janet responded.

> They just need to think and follow directions.

Millie's responses were similar to Janet's when conceptualizing the art unit. She described the ideal class and the best students in terms of affective rather than cognitive qualities.

> Enthusiastic. If they are enthusiastic they are willing to try anything. They are willing to try the unknown and they are willing to be free with their own self expression.
>
> The best student in anything is the one who is going to put forth the effort.
>
> I want them to enjoy doing it and at this point I think they are and we are going to put emphasis on that and encourage them to write on their own in different styles. And I want them to be thinking about their poem and they can do that.

In the STAR Teaching and Learning Component of Aids and Materials, Candy's (67%) average percentage of the maximum possible was greater than Janet's (53%) and Millie's (13%). Candy's plans included more aids and materials that enhanced learning and the development of thinking skills. As shown in table 3, scores on unit plans for high confidence areas (P.E., art, science) for Janet, Millie and Candy on aids and materials were 20%, 6% and 73%, respectively. Candy was the only one of the three to show increase in the percentage of maximum possible score in the high confidence area. The other two student teachers decreased in their scores.

In Performance Dimension I (Preparation, Planning, and Evaluation) the planning of homework was assessed and much variation between the students teachers was evident. For example, in the high confidence subjects (P.E., art, science), the percentages of the maximum possible scores ranged from a high of 50% (Candy) to a low of 0% (Millie). Although Candy's plans included homework assignments and made provisions for checking assigned homework, no evidence was noted that the assignments would accommodate the range of student needs and abilities.

A set of seven indicators comprise the Formal Assessment and Evaluation Component of the STAR Comprehensive Unit Plan and focus on the ability to plan for assessment and evaluation procedures that include formative and summative strategies. There is a need for a variety of procedures to be used as well as a variety of cognitive and performance levels to be assessed according to the needs and levels of individual students. Results indicate this component to be one of the lowest in Performance Dimension I (Preparation, Planning, and Evaluation) with the

percentages of maximum scores ranging from a high of 33% (Candy) to a low of 0% (Millie). The student teachers made some plans for evaluating mastery of objectives but failed to plan for a variety of assessment and evaluation formats sufficient to accommodate student differences and needs. Assessment of higher levels of cognitive learning and performance was not included in the plans. When questioned about plans for assessing student mastery of learning objectives, these student teachers replied as follows:

> Candy: I wanted them to demonstrate their knowledge by actually doing something such as writing a paragraph or an activity. I wanted them to be able to show me they knew about something. I can tell if my activities are helping them by what they say or facial expressions. I hate to have them write something because at this age level I'm not used to the way they write. I keep thinking, "What are they trying to say." So I think that at this age level a lot of activity needs to be observation and discussion and hands-on.

> Janet: My activities are evaluating what they have learned for that day. I would hope they accomplish my objectives, but also give them more practice.

> Millie: In art the kids are kind of on their own in this activity. The way the task is set up they can kind of progress at their own speed and still be part of the group. In social studies what will make them feel successful is that the kids take the knowledge to another day as if it's a seven day unit. On day eight, if they're still discussing day one, two, etc., you know, if they take it into something else.

In summarizing planning data, strengths of each student teacher's plan as well as areas in need of improvement were identified and discussed with each participant. Strengths of the comprehensive unit plan for Candy in general included acceptable use of goals and objectives, and time specification and logical sequence of activities.

Janet's strengths in planning were similar to Candy's with the exception of failing to include activites requiring students to use higher level thinking skills. Time specifications in all segments of planning was a strength that seemed to emerge in Janet's planning.

In comparison, Millie's objectives were consistent with curriculum requirements and activities planned engaged students in practice on objectives. The use of supplemental aids was also noted as a strength.

Target areas identified for the three student teachers reflected the same concerns. The teachers' adequate command of subject matter knowledge and the ability to differentiate lesson

content at more than one cognitive level was considered low. Content knowledge needed to be outlined and specified (e.g. define bay or natural resources). There was a need to plan activities that would engage students in a range of thinking skills and a need to place greater emphasis on accommodating individual needs and abilities. Plans for formal assessment needed to be included in the CUP. Assessments needed to reflect lesson objectives and a variety of data collection formats and item types. Goals, objectives and time allocations in planning were additional concerns for Millie.

Student Perceptions of Lesson Content

There was a consistent link between what the teachers described in the interviews as goals for their students and what students believed was important about the lessons. Candy's responses consistently emphasized the importance of students being actively involved to maximize learning outcomes. When asked what their teacher wanted them to learn, Candy's students responded with content-related goals. The following are typical responses from Candy's students when asked what they believed the most important element of the lesson was.

> How soil is formed and how sand forms and where it comes from.
> How soil is made from rock, pebbles, and pine cones.
> The soil and what makes up the soil.

When Candy's students were asked how they knew whether or not they were successful, their responses were filled with content-related statements. Her students knew what the objectives of the lesson were and they were confident that they had achieved the objectives. Some examples follow:

> I knew I was successful because I read the whole chapter and I looked at the pictures and I did the "Check Yourself". I wrote the definitions and in the beginning of the chapter I looked at the objectives.
>
> We read the definitions out loud and that helps you learn. Then she said we could do the "Check Yourself" and I had read the chapter and knew the answers.
>
> When she asked a question to the class about something we discussed, I knew the answer.

Students in Janet's and Millie's classes had a vague idea of what content was important in the lesson but responses were filled with behavior management goals. The following are typical

responses from Janet's students when asked what their teacher wanted them to learn and how they knew when they were successful.

> She wanted us to learn how to hop and how to hop on one foot.
> She wanted us to learn all kinds of different skills, and about space.
>
> She wanted to teach us to listen cause if we didn't listen we wouldn't know what to do.
> She wanted us to learn to play together, not to do anything like fight while having P.E.
>
> She wanted us not to push and shove and fight.
> She wanted us to spread out and stuff, hold our arms out and stuff.
>
> I know I was successful because I listened to what she told us and I did what she said.
>
> By listening and stuff like that and not playing around while she's doing a lesson.

Responses from Millie's students also focused on behavior management as an important element with only an occasional reference to content knowledge. The following responses were typical when Millie's students were asked about the most important points of the lesson.

> To listen and follow directions so you'll know what to do.
> She wanted us to learn how to make things.
> To do the best you can...to make us be the best class in the universe.
>
> She wanted us to learn that making a jewelry necklace was real important to the Indians.
> She wants us to learn when we are told to do something to do it.
>
> To follow the directions she gives.
> She wanted us to learn all kinds of stuff.
>
> She wanted us to learn how to make noodles so we can have a pow-wow.
>
> I knew I was successful because Ms. Sides told me I did well.
> She taught us how to do the page and didn't have to holler at us.

Students were also asked about the development of thinking skills. To pursue thinking during lesson activities students were asked what their teacher wanted them to really "think about" during the lesson. Again Candy's students' responses included ideas more related to the content of the lesson. For example:

> She wanted us to think about how to plant plants.
> How soil was and what's in the stuff and how it is made.
> What the bulbs really are and what soil is.
>
> How sand is made from rocks.
> She wanted us to really think about the questions she was asking us.

Many of Janet's and Millie's students gave no responses to this question. Most responses given were general in terms of content and vague as to "thinking about". Responses include the following:

> I wasn't even thinking about anything.
> She wanted us to think about art and Indians and that's all.
>
> To do something good.
> To write real special.
> I'm not quite sure.
>
> Art, she wanted us to keep our mind off the subject that we were on before and she wanted us to keep our mind on the subject we were on right now.
>
> To keep our mind on what we were doing.
> Doing your best
> Doing the best you can and the greatest.

A consistent finding, regardless of content or teacher, was that students did not perceive either the subject matter content or the learning activities as new. When asked if the teacher presented anything in the lesson that they had prior knowledge of, students could always remember something about the content and activities from previous years. The following excerpts are examples from the student interviews.

> We made a quilt in first grade. (art)
>
> I knew about Indians and pilgrims and how they built their houses and moved to a new land. (Social Studies)
>
> When the pilgrims found land and they landed on it... and how the Indians helped the pilgrims plant food. (Social Studies)
>
> How the Indians taught them how to shoot deer and make bows and arrows and all that and build houses... I learned that in second grade. (Social Studies)
>
> I knew that sand was made from rocks...I knew that rocks are rocks and soil is soil (Science).
>
> I knew everything except how to gallop backwards (physical education).
> We had played all the games before (physical education).
>
> We learned the exact same thing in kindergarten, first grade, second grade and now we're learning it again... the same old stuff.

Performance Data for Low Confidence Unit

To assess strengths and weaknesses in planning and teaching performance, three trained assessors completed three classroom observations on the teachers for each comprehensive unit. For each subject area taught (high and low confidence) the three observations were completed within the five days the unit was being taught. Table 4 shows the performance data for social studies, which was identified as a low confidence subject by all three teachers.

As shown the percentages of maximum possible for the components of Performance Dimension II (Classroom and Behavior Management) ranged from a low of 11% (Millie) on Monitoring and Maintaining Student Behavior to a high of 67% (Candy) on Classroom Routines. Millie consistently scored lower than the other two teachers on each component of Dimension II, while Candy's scores were the highest with the exception of the Teaching and Learning Component (TLC) of Managing Task-Related Behavior where Janet's score was the greatest (Janet, 33%; Candy, 22%).

In the STAR TLC of Time, indicator number 2 (Expectations for maintaining and completing timelines for tasks are communicated to students) was unacceptable for each teacher on each of the three observations. Assessment indicator number 5 (Minor interruptions are managed quickly and efficiently **or** there are no interruptions) had an acceptable decision for each observation.

Among the four assessment indicators composing STAR TLC Classroom Routines, indicator number 1 (The attention of students is ensured before directions for routines are given **or** students are attending) had the smallest number of acceptable decisions. For the most part, teachers exhibited acceptable behavior for indicator number 3 (Aids and materials are available and ready for use).

STAR TLC II.C (Student Engagement) calls for the assessor to generate an overall classroom engagement in learning rate at or above 90%. Of the nine observations made, only on two occasions were classrooms determined to be at or above this percentage.

The focus of Managing Task-Related Behavior is for the teacher to monitor and manage students' task-related behavior. Results of the data summary indicate no acceptable assessment

decisions to be evident for indicator number 2 (Active involvement is sought from students who are passively involved in learning ** or** no students are only passively involved). Only Janet scored acceptable on two of three observations for indicator number 5 (Uses techniques for maintaining the engagement of students who have been redirected **or** there is no persistent off-task behavior). Millie had similar scores for indicator number 1 (The teacher provides frequent changes in stimuli throughout the lesson to ensure learner attention and engagement in learning task(s). Of the five components in Performance Dimension II (Classroom and Behavior Management) Managing Task-Related Behavior exhibited the lowest overall scores.

A set of nine assessment indicators comprises the component of Monitoring and Maintaining Student Behavior. These indicators focus on the teacher's ability to monitor and maintain acceptable student behavior. Candy and Janet had 33 percent of the maximum possible score for this component while Millie only achieved 11 percent of the maximum possible score. The greatest number of acceptable decisions was for indicator number 6 (Uses positive feedback as a means of cuing behavior expectations for students as needed). Also worth noting is indicator number 3 (Uses appropriate methods to prevent/diffuse situations in which unacceptable behavior may occur ** or** there is no unacceptable behavior) where no acceptable decisions were made for any of the nine observations and indicator number 2 (Behavior of the entire class is effectively monitored throughout the lesson) which shows only one acceptable decision made (Janet).

In Performance Dimension III, Learning Environment, the indicators of most concern were number 4 (Enthusiasm for teaching, learning and the subject being taught is communicated to students), number 5 (Comments, questions, demonstrations and/or other contributions are sought from students throughout the lesson), and number 7 (Teachers responses are sufficient to address students' questions and comments) for Psychosocial Environment. The percent of maximum possible score for the psychosocial component ranged from a high of 58% acceptable (Janet) to a low of 22% acceptable (Candy). Percentages for the physical environment ranged from a high of 100% (Janet) to a low of 67% (Millie).

Because the focus of this research was subject matter knowledge, it is important to discuss Performance Dimension IV (Enhancement of Learning) and it's relation to lesson content in greater detail.

STAR TLC IV.A (Lesson and Activities Initiation) focuses on the beginning of the lesson and on the beginning of various teaching and learning activities as they arise during the lesson. Scores for these three student teachers ranged from a high of 16% (Janet) to a low of 6% (Millie). Of the ten indicators comprising this component, number 4 (The purpose and importance of learning activities are communicated to students), number 6 (Expectations about student engagement in learning tasks are communicated at the beginning of activities), number 7 (Clearly communicates the challenge of learning task(s) to students as needed), and number 10 (As new ideas/concepts/activities are introduced, they are related to past and future learning) show no acceptable decisions.

When students were interviewed following the lesson and asked about the importance of the lesson content and it's relevance to their lives, responses indicated no evidence of students relating lesson content to immediate needs or relevant situations. No integration of past and future learning was noted. "Growing up" was the focus of student responses in the classroom. For example,

> So when you grow up and you have kids, if your kid asks you, you'll know what it means.
>
> So when you grow up if you're a farmer, you can know what to plant.
>
> The teacher didn't tell us that yet. I think it is important because you just need to learn it.
>
> Maybe if you're gonna be an artist when you grow up, you'll have a good start right now in school.
>
> Maybe one day when we grow up we could have kids and our kids would ask us how to make a quilt.
>
> She wanted us to learn about Indians so when we grow up and get into college, you'll know the answer.
>
> When your kids get in third grade and they start learning it, you can be able to help them study.

The STAR TLC of Teaching Methods and Learning Tasks addresses the teacher's ability to utilize teaching methods and tasks in a manner that facilitates the achievement of planned learning objectives and that encourages student interaction and active involvement in learning. The percentage of maximum possible scores ranged from a high of 72% (Janet) to a low of 33% (Millie). For each observation for each student teacher, decisions for assessment indicator number 4 (The teacher and students interact in more than one group) were acceptable. For indicator number 5 (Methods and learning tasks used enhance mastery of learning objectives), only one of nine decisions was scored as acceptable. When students were asked about the activities that helped them achieve success the replies were quite mixed.

> She let us read the pages. When you read the pages out loud, then you can learn a lot. When she said we could do the "Check Yourself" if we wanted to.

> Because if you read the story, you know what to do. If you follow instructions like she says, then I "think" you would be successful.

> I know I was successful because she said it looked great. She taught us what to do. She told us the directions. She told us it would be fun.

The STAR TLC of Aids and Materials reflects assessment concerns regarding the teacher's ability to use planned aids and materials during the lesson in a manner that enhances students' learning. Percentages of acceptable decisions ranged from a high of 58% to a low of 25%. Indicator number 5 (The use of learning materials is appropriate for learning tasks and objectives) had the highest percentage score while indicator number 6 (Learning materials are used properly and accommodate the range of needs and abilities of students) was assessed as acceptable only on one occasion.

The STAR TLC IV.D of Content Accuracy and Emphasis focuses on the teacher's adequate command of subject knowledge, the teacher's ability to differentiate lesson content at more than one cognitive level and to emphasize structural frameworks for learning material as well as important elements within these. The percentages of maximum possible scores for this component ranged from 19% (Millie) to 33% (Candy). Candy was able to conceptualize the lesson in terms of student learning. However, she did not emphasize the value of topics nor did she emphasize the essential elements of content knowledge in social studies. The basic content knowledge was

presented by Candy in a logical way.

At no time did assessors make acceptable decisions for indicators number 2 (Emphasizes the value and importance of topics and activities), number 6 (Essential elements of content knowledge and/or performance tasks are emphasized) and number 7 (Potential areas or points of difficulty are emphasized throughout the lesson). Only on one occasion was indicator number 5 (Directions and explanations related to lesson content and/or learning tasks are effective) assessed as acceptable. Overall, indicator number 3 (Content knowledge is accurate and up-to-date) had the highest percent of acceptable decisions.

The three teachers scored extremely low in Thinking Skills (18%, 6%, 15%). Not once were the following indicators observed to be evident in these classrooms: number 1 (Associations are taught and used in the classroom), number 3 (involves students in developing principles and/or rules), number 5 (Encourages students to use mental imagery), and number 8 (Encourages critical analysis and/or problem solving. On two of Candy's three assessments, she did encourage students to elaborate and extend their own or other students' responses and on two occasions Janet was observed to encourage creative thinking.

Other than Oral and Written Communication, the STAR TLC of Clarification had one of the highest percentages of acceptable decisions. Candy scored 73% of the maximum possible. When questioned in regards to being confused during the lesson students provided answers such as:

> No, I wasn't confused.
> Well sort of at first, but she explained it to me again.
>
> I wasn't confused at all.
> One little time it was confusing.
>
> Just a little bit. She showed us how to do it and she explained it and then I understood.
> She looked over it and told us carefully about what we didn't understand.

The STAR TLC of Pace consists of three assessment indicators referencing the teacher's ability to monitor and adjust the pace of teaching and learning activities in order to effectively enhance student learning. The percentage of acceptable decisions ranged from a high of 33% (Candy and Millie) to a low of 22% (Janet).

Results for TLC IV.H, (Monitoring Learning Tasks and Informal Assessment) suggest a

concern for this component, particularly in monitoring student engagement in learning tasks. Initial engagement was not monitored in any lesson and only on one occasion was student engagement monitored during students' participation in learning tasks.

Percentages for the STAR TLC of Feedback (IV.I) ranged from 25% to 8%. Of greatest concern was indicator number 2 (Suggestions for improving performance are provided to students **or** none are needed).

Scores in Oral and Written Communication (100%, 75%, 100%) were nearly perfect. Only Millie had a few difficulties with appropriate vocabulary and the understandability of oral language.

Performance Data for High Confidence Unit

Table 5 shows the percentages of maximum possible scores for the three teachers in all Teaching/Learning Components in the four dimensions for the high confidence unit. While the differences between the three teachers on Performance Dimension II, III, and IV were not extreme, it is important to note that Candy's percentages changed more than did the other two student teachers. For example, Candy's percentages of the maximum possible score on Lesson and Activities Initiation increased from 10% in the Low Confidence Unit (Social Studies) to 33% in the High Confidence Unit (Science). A visual inspection of the two tables shows that Candy's percentages were high for the Science unit on seven of the ten components. The percentages for Oral and Written Communication were 100 in both situations.

For the other two teachers there was no consistent pattern of change from the low to the high confidence lessons.

In summary, the analysis of semi-structured interview, classroom observation and student perceptions data showed the teachers' adequate command of subject matter knowledge and the ability to differentiate lesson content at more than one cognitive level was low. The results indicate while some teachers were able to conceptualize the lesson in terms of student learning, they did not emphasize the value of topics nor the essential elements of content knowledge. Student teachers had trouble structuring the content, and planning for and accommodating

individuals differences and student needs within the classroom. Overall, content knowledge was assessed to be accurate, up-to-date, and presented in a logical way. These findings were confirmed by interviews with students when asked questions regarding content and presentation of subject matter knowledge.

Discussion, Conclusions and Implications

The purpose of this study was to determine the kinds of knowledge student teachers believe they need to teach an effective unit and to determine the relationship between content knowledge and on-the-job performance. The student teachers were interviewed to determine the body of ideas, concepts, facts and skills they hoped to teach their students over a 5-day period in two different units. One teacher, Candy was knowledgeable in both science and social studies and could transform the knowledge so that it was teachable. She understood the order in which concepts and topics should be taught and could identify the problems with which students might have difficulty. Candy reported that her knowledge of both science and social studies came from high school classes and college coursework. Her teacher education coursework helped tie together content knowledge and pedagogy. To compliment the self report data, a series of classroom observations was conducted. During teaching, Candy emphasized the important elements of the subject matter and presented concepts in a logical matter. This finding is confirmed, by interviews with Candy's students who, when asked immediately after class, knew which elements of the topic were important. However, she did not teach them to think critically about the content.

The other two teachers, Janet and Millie, had little knowledge of the central topics and concepts to be taught in physical education, art, and social studies. When asked what elements they intended to emphasize the responses were filled with affective rather than cognitive statements. There were many references to team work, doing your best, following directions and feeling good about your work. Responses from Janet and Millie and their students were for the most part void of the body of concepts and skills related to the subject matter content. The sources of knowledge for these teachers were the textbook, the curriculum guide and their own life experiences. Interestingly, the student teachers never referred to their supervising teacher as a

resource for content and pedagogical knowledge.

It was hypothesized that differences would be evident for the two units planned by each student teacher and the differences could be attributed to the use and adaptation of content knowledge. It was clear early in the data collection process that the difference would be between the three subjects rather than between the perceived levels of knowledge. The perceived differences in confidence did not affect the quality of planning. Student teachers' perceptions of competence in a subject matter area was not consistent with objective assessment of the ability to structure knowledge in a lesson plan. Scores on the units representing the two levels of knowledge and understanding of subject matter knowledge were not consistently different.

Qualitative data from student teacher interviews provided support for the decisions made by assessors for Performance Dimension I (Preparation, Planning and Evaluation). All three student teachers had difficulty articulating their knowledge of content and related pedagogy. Student teachers had trouble structuring the content, and planning for and accommodating individual differences and student needs within the classroom. In structuring the content, the relationship of objectives, content, activities and assessment was not considered. Planning for "form" rather than "substance" was evident in the unit plans, indicating that student teachers may be able to plan for a methods course and include what is required of them, but they seemingly have trouble adapting and using those plans in the actual classroom setting in a manner that accommodates students with individual needs and abilities.

These findings were confirmed, by interviews with students when asked questions regarding content and presentation of subject matter knowledge. There was a consistent link between what the teachers described in the interviews as goals for their students and what students believed was important about the lesson with few references to content knowledge. The depth of the teachers' subject matter knowledge and understandings gained by students was correspondent. If student teachers had inadequate command of content knowledge, they could not impart the content to their students in a way that enhanced the development of thinking skills, broadened their understandings and increased student interest and active involvement. Critical concepts and principles were not

made relevant to students. Information gained by students was only processed at a surface level enabling them to repeat and memorize so it could be recorded and reproduced.

Regardless of the content knowledge, there were consistent weaknesses among teachers, especially in the areas of informal and formal assessment, and teaching critical thinking skills. Few deliberate efforts were made by teachers to elicit a variety of comments, responses and information from students which could have been useful for informally assessing their relative mastery of learning objectives. A number of other studies confirm a lack of visible attention to evaluation procedures during planning (Taylor, 1970; Morine, 1975; Yinger, 1977).

Likewise, little consideration was given to assessing and building on prior learning. Student teachers were unable to integrate thinking skills with content to help students build on prior knowledge, deepen conceptual understandings of the content and at the same time use that knowledge in critical thinking, problem solving, creative thinking and acquiring new knowledge.

The classroom observation data suggest that having command of knowledge of subject matter and knowing content-specific pedagogy are important elements of teaching "expertise" as defined by the STAR. Having inadequate command of content knowledge and related pedagogical skills makes it difficult to facilitate and guide learning. This reinforces the concern of Shulman and others (Shulman, 1986; Leinhardt & Smith, 1985) regarding the importance of subject matter knowledge in the teaching learning process. The data appears to support arguments of Leinhardt and Smith (1985) that "subject matter knowledge supports lesson structure and acts as a resource in the selection of examples, formulation of explanations, and demonstrations" (page 247). The data also suggest that the STAR is an integrated, holistic conception of teaching and learning (Ellett, 1990) and is more than a "checklist."

The results of this study compare with results obtained from an analysis of elements of effective teaching and learning derived from nearly 6,000 classroom-based assessments piloting the STAR assessment process (Claudet, Hill, Ellett & Naik, 1990). Overall, the results indicated that less than 50% of the total possible assessment decisions for the sample of 6,000 classrooms observed were assessed as acceptable in areas such as content accuracy and emphasis, monitoring

learning tasks and informal assessment, and feedback. Only 22% were assessed as acceptable in developing higher order thinking skills. The greatest differences noted between classrooms of beginning and experienced teachers were assessment indicators targeting effective classroom and behavior management where experienced teachers were assessed with a higher percentage of acceptable decisions. The fact that beginning and experienced teachers did not differ greatly in content knowledge and emphasis but did in classroom and behavior management raises an interesting issue: Is the ability to structure content increased through experience? The findings would seem to support current thinking that experience is not equivalent to expertise (Clarridge, Stein & Berliner, 1988).

By combining interview data with STAR performance data a more complex description of the content and structure of the knowledge planned for and imparted to students was possible. Qualitative data from student teacher interviews provided support for the decisions made by the assessors for Performance Dimension I (Preparation, Planning, and Evaluation) and student interview responses supported assessor decisions regarding the teachers' ability to enhance learning.

Finally, the results of these case studies on comprehensive unit planning and its relation to teacher knowledge of curriculum, pedagogy and content presented above have important implications for future research as well as teacher education programs. The empirical data relating content coverage or emphasis to achievement is well documented (Berliner & Rosenshine, 1977; Cooley & Leinhardt, 1980). Not so well documented is the relationship between teachers' expertise in a content area and their ability to structure lessons emphasizing critical concepts and principles. This study supports the link between teachers' knowledge of the content and their ability to plan and enhance student learning of the content. Although a number of studies report that teacher planning begins with the content to be taught (Goodlad, Klein & Associates,1974; Peterson, Marx & Clark,1978; Yinger, 1977; Zahorik, 1975), further examination reveals that teachers typically listed topics rather than addressing essential concepts and principles. This study suggests that greater attention be given to the underlying concepts and principles critical to understanding the content and ways that these essential elements are emphasizes. An informed knowledge of student

teachers' abilities in planning and teaching can result in preservice training where students are helped in integrating content knowledge and content specific pedagogical skills, identifying critical concepts and principles within the content, seeing the relationship among these elements, and finally, helping students apply their learning in a school setting so that they are planning for real students instead of for a professor.

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Table 1. Basic Description of Required Coursework

Core Curriculum

English	12
Mathematics	9
Science	12
Social Sciences	15
Health and Nutrition	4
Physical Education	2

Curriculum in Elementary Education

Methods: math, reading, language arts, science, social studies, music	19
Ed. Psychology	6
Educational Foundations	4
Special Education	3
Art Methods	3
P.E. Methods	3
Communication	3
Fine Arts	6
Library Science	4
Tests and Measurements	3

TABLE 2. SCORES ON CUPS FOR LOW CONFIDENCE AREAS

SOCIAL STUDIES

PERFORMANCE DIMENSION I : PREPARATION, PLANNING, AND EVALUATION
TEACHING/LEARNING COMPONENT I.A : GOALS AND OBJECTIVES

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. The plan includes learning goals.	+	+	+	+	+	+	+	+	-
2. Objectives for learning are stated in terms of student outcomes.	+	+	+	-	-	-	+	+	+
3. Learning objectives are referenced to goals and are in a logical sequence.	-	-	-	-	-	-	-	-	-
4. Learning objectives accommodate the range of developmental and ability levels of students and student needs.	+	-	-	-	-	-	-	-	-
5. Student performance assessment data have been used to develop learning objectives as appropriate.	+	-	-	+	-	-	-	-	+
6. Goals and objectives are consistent with state, district and school curriculum.	-	+	-	-	-	-	+	+	+
Maximum Score		18			18			18	
Actual Score		9			4			9	
% of Maximum		50%			22%			50%	

TEACHING/LEARNING COMPONENT I.B: TEACHING METHODS AND LEARNING TASKS

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Activities planned engage students in practice on objectives.	-	+	+	+	-	-	+	-	+
2.	Activities are logically sequenced.	+	+	+	-	+	-	+	+	+
3.	Activities are separated into component parts as needed.	+	+	+	-	-	-	+	-	-
4.	Activities accommodate the range of developmental and ability levels of students and student needs.	+	-	-	-	-	-	-	-	-
5.	Activities are planned that engage students in a range of thinking skills as appropriate.	+	+	+	-	-	-	+	+	+
6.	Remedial and enrichment activities for specific students are planned as needed.	-	-	-	-	-	-	-	-	-
	Maximum Score		18			18			18	
	Actual Score		12			2			9	
	% of Maximum		67%			11%			50%	

TEACHING/LEARNING COMPONENT I.C : ALLOCATED TIME AND CONTENT COVERAGE

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The plan specifies the amount of time to be spent on each activity.	-	-	-	+	+	+	+	+	+
2.	The plan specifies a prioritized or hierarchical and logical order in which knowledge is structured and will be learned.	-	-	+	-	-	-	+	-	+
3.	The plan specifies the amount of time allocated for learning each segment of content.	-	-	-	-	-	-	+	+	+
4.	The plan specifies adequate breadth and depth of content knowledge.									
	Maximum Score		12			12			12	
	Actual Score		2			3			9	
	% of Maximum		16%			25%			75%	

TEACHING/LEARNING COMPONENT I.D : AIDS AND MATERIALS

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Aids and materials are logically sequenced as needed.	-	+	-	+	-	-	+	+	+
2.	The plan includes a variety of pertinent aids and materials that enhance learning.	+	+	+	+	-	-	-	+	+
3.	Aids and materials planned accommodate the range of developmental and ability levels of students and student needs.	+	+	+	-	-	-	-	-	+
4.	The plan specifies aids and materials that enhance the development of thinking skills.	+	+	+	-	-	-	+	+	+
5.	The plan specifies supplemental and/or differentiated aids and materials.	+	+	+	-	+	-	-	-	-
	Maximum Score		15			15			15	
	Actual Score		13			3			9	
	% of Maximum		87%			20%			60%	

TEACHING/LEARNING COMPONENT I.E : HOMEWORK

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Plans include a sufficient number of homework assignments that enhance learning.	+	+	-	-	-	-	+	+	-
2.	Homework assignments accommodate the range of student developmental and ability levels and needs.	-	+	-	+	-	-	-	-	-
3.	Homework assignments reasonably match the availability of home resources as needed.	-	+	+	-	+	+	-	+	-
4.	Plans make provision for checking homework and providing feedback to students.	-	-	-	-	-	-	-	-	-
	Maximum Score		12			12			12	
	Actual Score		5			3			3	
	% of Maximum		42%			25%			25%	

TEACHING/LEARNING COMPONENT I.F : FORMAL ASSESSMENT AND EVALUATION

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Formal assessment and evaluation procedures are planned to measure each learning objective.	+	-	-	-	+	-	+	-	+
2.	More than one kind of formal assessment and evaluation procedure is planned.	-	-	-	-	-	-	+	+	-
3.	Formal assessment and evaluation procedures reflect a variety of formats and items.	+	+	-	-	+	-	-	-	-
4.	Formal assessment and evaluation procedures are appropriate for the developmental and ability levels and needs of all students.	-	-	-	-	-	-	-	-	-
5.	Formal assessment and evaluation procedures reflect a variety of cognitive and/or performance levels as appropriate.	-	-	-	-	-	-	+	+	+
6.	Provision is made to communicate performance standards on formal assessment and evaluation procedures to students.	-	-	-	-	-	-	-	-	-
7.	Provision is made to provide feedback of assessment and evaluation results to students and parents.	-	-	-	-	-	-	-	-	-
	Maximum Score		21			21			21	
	Actual Score		3			2			7	
	% of Maximum		14%			9%			33%	

TABLE 3. SCORES ON CUPS FOR HIGH CONFIDENCE AREAS

PERFORMANCE DIMENSION I : PREPARATION, PLANNING, AND EVALUATION
TEACHING/LEARNING COMPONENT I.A : GOALS AND OBJECTIVES

ASSESSMENT INDICATOR	P.E. Janet			ART Millie			SCIENCE Candy		
	Assessment Decision			Assessment Decision			Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. The plan includes learning goals.	+	+	+	-	-	-	-	-	-
2. Objectives for learning are stated in terms of student outcomes.	+	+	+	+	+	+	-	+	+
3. Learning objectives are referenced to goals and are in a logical sequence.	+	-	-	-	-	-	-	-	-
4. Learning objectives accommodate the range of developmental and ability levels of students and student needs.	-	-	-	-	-	-	-	-	-
5. Student performance assessment data have been used to develop learning objectives as appropriate.	-	+	-	-	+	-	-	-	-
6. Goals and objectives are consistent with state, district and school curriculum.	+	+	+	+	+	+	+	+	+
	18	11	61%	18	6	33%	18	5	28%

TEACHING/LEARNING COMPONENT I.B: TEACHING METHODS AND LEARNING TASKS

ASSESSEMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Activities planned engage students in practice on objectives.	+	+	+	-	-	+	-	-	+
2.	Activities are logically sequenced.	+	+	+	+	-	+	+	+	+
3.	Activities are separated into component parts as needed.	+	+	+	+	+	+	+	+	+
4.	Activities accommodate the range of developmental and ability levels of students and student needs.	-	-	-	-	-	+	-	-	-
5.	Activities are planned that engage students in a range of thinking skills as appropriate.	-	+	-	-	-	+	+	+	+
6.	Remedial and enrichment activities for specific students are planned as needed.	-	-	-	-	-	-	-	-	-
		18	10	55%	18	11	61%	18	11	55%

TEACHING/LEARNING COMPONENT I.C : ALLOCATED TIME AND CONTENT COVERAGE

ASSESSEMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The plan specifies the amount of time to be spent on each activity.	-	+	+	-	-	+	+	+	+
2.	The plan specifies a prioritized or hierarchical and logical order in which knowledge is structured and will be learned.	+	-	-	-	-	-	+	+	+
3.	The plan specifies the amount of time allocated for learning each segment of content.	-	-	-	-	-	-	+	-	+
4.	The plan specifies adequate breadth and depth of content knowledge.	-	-	-	-	-	-	-	-	+
		12	3	25%	12	1	8%	12	9%	75%

TEACHING/LEARNING COMPONENT I.D : AIDS AND MATERIALS

ASSESSEMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Aids and materials are logically sequenced as needed.	-	-	+	-	-	-	+	+	+
2.	The plan includes a variety of pertinent aids and materials that enhance learning.	-	-	+	-	-	-	+	+	+
3.	Aids and materials planned accommodate the range of developmental and ability levels of students and student needs.	-	-	-	-	-	-	+	+	-
4.	The plan specifies aids and materials that enhance the development of thinking skills.	-	-	-	-	-	-	-	+	+
5.	The plan specifies supplemental and/or differentiated aids and materials.	-	-	+	-	-	+	-	-	+
		15	3	20%	15	1	6%	15	11	73%

TEACHING/LEARNING COMPONENT I.E : HOMEWORK

ASSESSEMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Plans include a sufficient number of homework assignments that enhance learning.	-	-	-	-	-	-	+	+	-
2. Homework assignments accommodate the range of student developmental and ability levels and needs.	-	+	-	-	-	-	-	-	-
3. Homework assignments reasonably match the availability of home resources as needed.	-	+	+	-	-	-	+	-	-
4. Plans make provision for checking homework and providing feedback to students.	-	-	-	-	-	-	+	+	+
	12	3	25%	12	0	0%	12	6	50%

TEACHING/LEARNING COMPONENT I.F : FORMAL ASSESSMENT AND EVALUATION

ASSESSEMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Formal assessment and evaluation procedures are planned to measure each learning objective.	-	-	+	-	-	-	-	-	+
2. More than one kind of formal assessment and evaluation procedure is planned.	-	-	+	-	-	-	+	+	+
3. Formal assessment and evaluation procedures reflect a variety of formats and items.	-	-	-	-	-	-	-	-	-
4. Formal assessment and evaluation procedures are appropriate for the developmental and ability levels and needs of all students.	-	-	+	-	-	-	-	-	-
5. Formal assessment and evaluation procedures reflect a variety of cognitive and/or performance levels as appropriate.	-	-	-	-	-	-	-	-	-
6. Provision is made to communicate performance standards on formal assessment and evaluation procedures to students.	-	-	+	-	-	-	-	-	-
7. Provision is made to provide feedback of assessment and evaluation results to students and parents.	-	-	-	-	-	-	-	-	-
	21	4	19%	21	0	0%	21	4	19%

TABLE 4: PERFORMANCE DATA FOR LOW CONFIDENCE AREAS

SOCIAL STUDIES

PERFORMANCE DIMENSION II : CLASSROOM AND BEHAVIOR MANAGEMENT
TEACHING/LEARNING COMPONENT II.A : TIME

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Learning activities begin promptly.	+	+	+	+	+	-	+	+	-
2.	Expectations for maintaining and completing timelines for tasks are communicated to students.	-	-	-	-	-	-	-	-	-
3.	There are no unnecessary delays during the lesson.	-	-	-	-	-	-	+	-	-
4.	There are no undesirable digressions.	+	+	-	+	+	+	-	+	+
5.	Minor interruptions are managed quickly and efficiently **or** there are no interruptions.	+	+	+	+	+	+	+	+	+
6.	Learning activities reasonably match the time allocated for learning.	-	-	+	+	-	+	+	-	-
7.	Supplemental activities are provided as needed to fill the time allocated for learning.	-	+	+	-	-	-	+	-	-
8.	Learning activities continue until the end of the allocated time period.	-	+	+	+	-	-	+	+	+
	Maximum Score		24			24			24	
	Actual Score		13			11			15	
	% of Maximum		54%			46%			63%	

TEACHING/LEARNING COMPONENT II.B : CLASSROOM ROUTINES

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The attention of students is ensured before directions for routines are given **or** students are attending.	-	-	-	+	-	-	-	+	-
2.	The teacher gives clear administrative directions for classroom routines **or** no directions are needed.	-	+	-	-	-	-	+	+	-
3.	Aids, materials and equipment are available and ready for use.	+	-	+	+	+	-	+	+	+
4.	Routine tasks are dealt with in an efficient manner.	-	+	-	-	-	-	+	-	+
	Maximum Score		12			12			12	
	Actual Score		4			3			8	
	% of Maximum		33%			25%			67%	

TEACHING/LEARNING COMPONENT II.C : STUDENT ENGAGEMENT

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Approximately 90% or more of the students are engaged in learning throughout the lesson.	-	+	-	-	+	-	-	-	-

TEACHING/LEARNING COMPONENT II.D : MANAGING TASK-RELATED BEHAVIOR

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The teacher provides frequent changes in stimuli throughout the lesson to ensure learner attention and engagement in learning task(s)	-	-	+	-	+	+	-	-	+
2.	Active involvement is sought from students who are passively involved in learning **or** no students are only passively involved.	-	-	-	-	-	-	-	-	-
3.	Pays attention to/monitors momentary off-task behavior throughout the lesson **or** there is no momentary off-task behavior.	-	-	+	-	-	-	-	-	-
4.	Verbal and/or non-verbal techniques are used to redirect students who are persistently off-task **or** there is no persistent off-task behavior.	-	-	+	-	-	-	-	-	+
5.	Uses techniques for maintaining the engagement of students who have been redirected **or** there is no persistent off-task behavior.	-	+	+	-	-	-	-	-	+
6.	Efforts to redirect students who are persistently off task are successful **or** there is not persistent off-task behavior.	-	-	+	-	-	-	-	-	+
	Maximum Score		18			18			18	
	Actual Score		6			2			4	
	% of Maximum		33%			11%			22%	

TEACHING/LEARNING COMPONENT II.E : MONITORING AND MAINTAINING STUDENT BEHAVIOR

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Expectations about acceptable student behavior are made clear and are consistently maintained throughout the lesson **or** student behavior indicates that expectations are clear and consistent.	-	-	+	-	-	-	-	-	+
2.	Behavior of the entire class is effectively monitored throughout the lesson.	-	-	+	-	-	-	-	-	-
3.	Uses appropriate methods to prevent/diffuse situations in which unacceptable behavior may occur **or** there is no unacceptable behavior.	-	-	-	-	-	-	-	-	-
4.	Students are provided (verbal and/or non-verbal) feedback about acceptable and unacceptable behavior.	-	+	-	-	+	-	-	-	-
5.	Feedback provided to students about their behavior is consistent with behavioral expectations.	-	-	+	-	-	-	-	-	+
6.	Uses positive feedback as a means of cuing behavior expectations for students as needed.	-	+	+	-	+	-	-	+	+
7.	Uses techniques to stop unacceptable behavior **or** none are needed **or** there is no unacceptable behavior.	-	-	+	-	+	-	-	+	+
8.	Unacceptable behavior is dealt with quickly **or** there is no unacceptable behavior.	-	-	+	-	-	-	-	-	+

9.	Unacceptable behavior is dealt with in a reasonable manner; **or** there is no unacceptable behavior.	-	-	+		-	-	-		-	+	+
	Maximum Score		27				27				27	
	Actual Score		9				3				9	
	% of Maximum		33%				11%				33%	

PERFORMANCE DIMENSION III : LEARNING ENVIRONMENT
TEACHING/LEARNING COMPONENT III.A : PSYCHOSOCIAL LEARNING ENVIRONMENT

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Establishes a classroom climate of courtesy and respect.	-	-	+	-	+	+	-	+	-
2. Warmth and friendliness are demonstrated throughout the lesson.	+	+	+	+	+	+	+	-	-
3. Comments to or about students are free of sarcasm, ridicule, and derogatory, demeaning or humiliating references.	+	-	+	+	-	+	+	-	-
4. Enthusiasm for teaching, learning and the subject being taught is communicated to students.	-	-	+	-	-	-	-	-	-
5. Comments, questions, examples, demonstrations and/or other contributions are sought from students throughout the lesson.	-	-	-	-	-	-	-	+	-
6. Considers, recognizes and/or comments on students' contributions.	-	+	-	-	+	-	-	-	-
7. Teachers' responses are sufficient to address students' questions and comments.	-	-	+	-	-	-	-	-	-
8. Manages incorrect responses in a way that maintains students' dignity **or** there were no incorrect responses.	+	+	+	+	-	+	+	-	-
9. Shows patience, empathy or understanding for students who respond poorly or who have difficulty **or** no students have difficulty.	+	+	+	+	-	-	+	-	-

10.	The lesson is personalized for students.	-	+	+	-	+	+	+	+	-
11.	Is fair and impartial in dealings with students.	-	+	+	-	-	-	-	-	-
12.	Students are given reasons for actions, decisions or directives made by the teacher as needed.	+	+	-	-	-	-	-	-	-
	Maximum Score		36			36			36	
	Actual Score		21			13			8	
	% of Maximum		58%			36%			22%	

TEACHING/LEARNING COMPONENT III.B : PHYSICAL LEARNING ENVIRONMENT

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The classroom is neat, safe and arranged in an orderly manner.	+	+	+	+	+	-	+	-	+
2.	Display(s) create a pleasant atmosphere and serve a thematic/content-related purpose.	+	+	+	+	+	-	+	+	+
3.	The functional elements of the learning environment are arranged to effectively implement learning activities.	+	+	+	+	-	-	+	+	+
4.	Arranges the functional elements of the learning environment to accommodate students with special needs **or** there are no students with special needs.	+	+	+	+	+	+			
	Maximum Score		12			12			12	
	Actual Score		12			8			11	
	% of Maximum		100			67%			92%	

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Student attention is ensured before directions and explanations for learning activities are provided **or** students are attending.	-	-	-	-	-	-	-	+	-
2.	Activities are initiated with motivating introductions which are content related.	-	+	-	-	-	-	-	-	-
3.	Clearly communicates specific learning outcomes to students.	-	-	-	-	+	-	-	-	-
4.	The purpose and importance of learning activities are communicated to students.	-	-	-	-	-	-	-	-	-
5.	Procedural directions necessary to implement learning tasks are clear and complete.	-	-	+	-	-	-	-	+	-
6.	Expectations about student engagement in learning tasks are communicated at the beginning of activities.	-	-	-	-	-	-	-	-	-
7.	Clearly communicates the challenge of learning task(s) to students as needed.	-	-	-	-	-	-	-	-	-
8.	Encourages all students to participate.	-	-	+	-	-	-	-	-	-
9.	Reviews past learning to ensure student's readiness for new learning as needed.	-	+	+	-	+	-	-	+	-
10.	As new ideas/concepts/ activities are introduced, they are related to past and future learning.	-	-	-	-	-	-	-	-	-
	Maximum Score		30			30			30	
	Actual Score		5			2			3	
	% of Maximum		16%			6%			10%	

TEACHING/LEARNING COMPONENT IV.B : TEACHING METHODS AND LEARNING TASKS

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Use of methods is appropriate for the complexity of lesson content.	+	+	+	-	-	+	+	-	+
2.	Teaching methods and learning tasks or topics within an activity are sequenced in a logical order.	+	+	+	+	-	+	+	+	+
3.	Uses two or more methods that enhance student interest and actively involve students in learning tasks.	-	-	+	-	-	-	-	-	+
4.	The teacher and the students interact in more than one group size.	+	+	+	+	+	+	+	+	+
5.	Methods and learning tasks used enhance mastery of learning objectives.	-	-	+	-	-	-	-	-	-
6.	Provision is made for lesson/activities closure.	-	+	+	-	-	-	-	-	-
	Maximum Score		18			18			18	
	Actual Score		13			6			9	
	% of Maximum		72%			33%			50%	

TEACHING/LEARNING COMPONENT IV.C : AIDS AND MATERIALS

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. The use of teaching aids is appropriate for methods and objectives.	-	+	+	-	+	+	-	-	-
2. Teaching aids are used properly and accommodate the range of student needs and abilities.	-	+	+	-	-	-	-	-	-
3. Teaching aids are used at appropriate times in the lesson.	+	-	+	-	-	-	-	-	-
4. The use of teaching aids broa dens understandings and enhances learning.	-	+	+	-	-	-	-	-	-
5. The use of learning materials is appropriate for learning tasks and objectives.	-	+	+	-	+	+	+	+	+
6. Learning materials are used properly and accommodate the range of needs and abilities of students.	-	-	-	-	-	-	-	-	+
7. Learning materials are used at appropriate times in the lesson.	+	-	+	+	-	+	+	-	+
8. Use of learning materials broadens student understandings and enhances learning.	-	+	+	-	-	-	-	-	-
Maximum Score		24			24			24	
Actual Score		14			6			7	
% of Maximum		58%			25%			29%	

TEACHING/LEARNING COMPONENT IV.D : CONTENT ACCURACY AND EMPHASIS

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Students are given opportunities to learn at more than one cognitive and/or performance level.	+	+	-	-	+	-	+	+	-
2. Emphasizes the value and importance of topics and activities.	-	-	-	-	-	-	-	-	-
3. Content knowledge is accurate and up-to-date.	-	+	+	-	+	+	+	+	+
4. Content knowledge is logical.	-	-	+	-	-	+	+	-	+
5. Directions and explanations related to lesson content and/or learning tasks are effective.	-	-	+	-	-	-	-	-	-
6. Essential elements of content knowledge and/or performance tasks are emphasized.	-	-	-	-	-	-	-	-	-
7. Potential areas or points of difficulty are emphasized throughout the lesson.	-	-	-	-	-	-	-	-	-
Maximum Score		21			21			21	
Actual Score		6			4			7	
% of Maximum		29%			19%			33%	

TEACHING/LEARNING COMPONENT IV.E : THINKING SKILLS

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Associations are taught and used in learning.	-	-	-	-	-	-	-	-	-
2.	Involves students in developing concepts.	-	-	-	-	+	-	-	-	-
3.	Involves students in developing principles and/or rules.	-	-	-	-	-	-	-	-	-
4.	Encourages students to think of and recall examples from their own experiences.	-	+	+	-	-	-	-	+	-
5.	Encourages students to use mental imagery.	-	-	-	-	-	-	-	-	-
6.	Asks a variety of questions.	-	+	-	-	-	-	-	-	+
7.	Wait time is used to enhance student learning.	-	-	-	-	-	-	-	+	-
8.	Encourages critical analysis and/or problem solving.	-	-	-	-	-	-	-	-	-
9.	Encourages students to elaborate, extend or critique their own or other students' responses.	-	-	-	-	-	+	-	+	+
10.	Encourages creative thinking.	-	+	+	-	-	-	-	-	-
11.	Provides opportunities for the extension of learning to new contexts.	-	-	+	-	-	-	-	-	-
	Maximum Score		33			33			33	
	Actual Score		6			2			5	
	% of Maximum		18%			6%			15%	

TEACHING/LEARNING COMPONENT IV.F : CLARIFICATION

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Areas of misunderstanding or difficulty are identified before students ask questions **or** no misunderstanding or difficulty occurs.	+	-	-	-	-	-	+	+	-
2.	Different words or examples are used in clarification **or** no clarification is needed.	+	+	-	-	+	-	+	+	+
3.	Bases for learner difficulties or misunderstandings are sought **or** no misunderstandings or difficulties occur **or** probing is not necessary.	+	-	+	-	+	-	+	-	+
4.	Clarifications are made for individuals or small groups rather than for the entire class **or** this type of clarification is not necessary.	+	+	+	-	+	-	+	+	-
5.	Attempts to eliminate misunderstanding are successful **or** no misunderstanding occurs.	+	-	+	-	+	-	+	+	-
	Maximum Score		15			15			15	
	Actual Score		10			4			17	
	% of Maximum		67%			27%			73%	

TEACHING/LEARNING COMPONENT IV.G : PACE

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Learning activities are implemented at an appropriate pace.	-	-	-	-	-	+	+	-	-
2. Summarizes or reviews during the lesson to monitor/assess the pace of teaching and learning.	-	+	-	-	-	-	-	-	-
3. Provides sufficient time for students to complete learning task(s).	-	-	+	+	-	+	+	+	-
Maximum Score		9			9			9	
Actual Score		2			3			3	
% of Maximum		22%			33%			33%	

TEACHING/LEARNING COMPONENT IV.H : MONITORING LEARNING TASKS AND INFORMAL ASSESSMENT

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Monitors students' initial engagement in learning tasks.	-	-	-	-	-	-	-	-	-
2. Monitors students' engagement during learning tasks.	-	-	+	-	-	-	-	-	-
3. Monitors the completion of learning tasks.	-	-	+	-	-	-	-	-	+
4. Solicits a range of responses from students for informal assessment purposes.	-	+	-	-	-	-	-	+	-
5. A variety of levels of learning is assessed as appropriate.	-	+	-	-	-	-	-	+	-
6. Adjustments within the lesson are made as needed **or** no adjustments are necessary.	-	-	+	-	-	+	+	-	-
Maximum Score		18			18			18	
Actual Score		5			1			4	
% of Maximum		28%			5%			22%	

TEACHING/LEARNING COMPONENT IV.I : FEEDBACK

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Provides specific feedback to students about responses which are adequate and inadequate.	-	+	-	-	-	-	-	+	-
2.	Suggestions for improving performance are provided to students **or** none are needed.	-	-	-	-	-	+	-	-	-
3.	Revisits students who have responded inadequately.	-	-	-	-	-	+	-	-	+
4.	Provides specific feedback to students when they have mastered learning objective(s).	-	-	-	-	-	+	-	+	-
	Maximum Score		12			12			12	
	Actual Score		1			3			3	
	% of Maximum		18%			25%			25%	

TEACHING/LEARNING COMPONENT IV.J : ORAL AND WRITTEN COMMUNICATION

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Written language used in lesson presentation is accurate.	+	+	+	+	+	+	+	+	+
2.	Oral language used in lesson presentation is accurate and easy to understand.	+	+	+	+	-	+	+	+	+
3.	Uses appropriate vocabulary in oral and written language.	+	+	+	+	-	+	+	+	+
4.	Communication is precise with few false starts, interrupters or inappropriate qualifiers.	+	+	+	+	-	+	+	+	+
	Maximum Score		12			12			12	
	Actual Score		12			9			12	
	% of Maximum		100			75%			100	

TABLE 5: PERFORMANCE DATA FOR HIGH CONFIDENCE AREAS
PERFORMANCE DIMENSION II : CLASSROOM AND BEHAVIOR MANAGEMENT
TEACHING/LEARNING COMPONENT II.A : TIME

ASSESSMENT INDICATOR	P.E Janet Assessment Decision 1	2	3	ART Millie Assessment Decision 1	2	3	SCIENCE Candy Assessment Decision 1	2	3
1. Learning activities begin promptly.	+	+	+	-	+	+	+	-	+
2. Expectations for maintaining and completing timelines for tasks are communicated to students.	-	-	-	-	-	-	-	-	-
3. There are no unnecessary delays during the lesson.	-	-	+	-	-	-	-	-	+
4. There are no undesirable digressions.	+	+	+	+	+	+	+	-	-
5. Minor interruptions are managed quickly and efficiently **or** there are no interruptions.	+	+	+	+	+	+	+	+	+
6. Learning activities reasonably match the time allocated for learning.	+	-	+	-	+	+	-	-	-
7. Supplemental activities are provided as needed to fill the time allocated for learning.	+	+	+	-	-	+	-	-	+
8. Learning activities continue until the end of the allocated time period.	+	+	+	-	-	-	+	+	+
Maximum Score		24			24			24	
Actual Score		18			11			11	
% of Maximum		75%			46%			46%	

TEACHING/LEARNING COMPONENT II.B : CLASSROOM ROUTINES

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The attention of students is ensured before directions for routines are given **or** students are attending.	+	-	-	+	+	+	-	-	+
2.	The teacher gives clear administrative directions for classroom routines **or** no directions are needed.	+	-	-	-	+	-	-	+	+
3.	Aids, materials and equipment are available and ready for use.	+	+	+	-	+	-	+	-	+
4.	Routine tasks are dealt with in an efficient manner.	+	-	-	-	-	-	-	+	+
	Maximum Score		12			12			12	
	Actual Score		6			4			7	
	% of Maximum		50%			33%			58%	

TEACHING/LEARNING COMPONENT II.C : STUDENT ENGAGEMENT

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Approximately 90% or more of the students are engaged in learning throughout the lesson.	-	-	-	-	+	-	-	-	+

TEACHING/LEARNING COMPONENT II.D : MANAGING TASK-RELATED BEHAVIOR

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The teacher provides frequent changes in stimull throughout the lesson to ensure learner attention and engagement in learning task(s).	+	+	+	-	+	-	-	-	-
2.	Active involvement is sought from students who are passively involved in learning **or** no students are only passively involved.	-	-	+	-	-	-	+	-	-
3.	Pays attention to/monitors off-task behavior throughout the lesson **or** there is not momentary off-task behavior.	-	-	-	-	-	-	-	-	-
4.	Verbal and/or non-verbal techniques are used to redirect students who are persistently off-task **or** there is no persistent off-task behavior.	-	-	-	-	-	-	-	-	+
5.	Uses techniques for maintaining the engagement of students who have been redirected **or** there is no persistent off-task behavior.	-	-	-	-	+	-	-	-	+
6.	Efforts to redirect students who are persistently off-task are successful **or** there is no persistent off-task behavior.	-	-	-	-	-	-	-	-	-
	Maximum Score		18			18			18	
	Actual Score		4			2			3	
	% of Maximum		22%			11%			17%	

TEACHING/LEARNING COMPONENT II.E : MONITORING AND MAINTAINING STUDENT BEHAVIOR

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Expectations about acceptable student behavior are made clear and are consistently maintained throughout the lesson **or** student behavior indicates that expectations are clear and consistent.	-	-	-	-	+	-	-	-	-
2. Behavior of the entire class is effectively monitored throughout the lesson.	+	-	+	-	-	-	+	-	-
3. Uses appropriate methods to prevent/diffuse situations in which unacceptable behavior may occur **or** there is no unacceptable behavior.	-	-	+	-	-	-	-	-	-
4. Students are provided (verbal and/or non-verbal) feedback about acceptable and unacceptable behavior.	-	+	-	-	+	+	-	+	+
5. Feedback provided to students about their behavior is consistent with behavioral expectations.	-	-	-	-	-	-	-	-	+
6. Uses positive feedback as a means of cuing behavior expectations for students as needed.	+	+	+	-	-	-	+	+	+
7. Uses techniques to stop unacceptable behavior **or** none are needed **or** there is no unacceptable behavior.	+	+	+	+	+	+	-	+	+
8. Unacceptable behavior is dealt with quickly **or** there is no unacceptable behavior.	+	-	+	-	-	-	-	+	+

9.	Unacceptable behavior is dealt with in a reasonable manner; **or** there is no unacceptable behavior.	+	-	+	-	+	-	-	+	+	
	Maximum Score		27			27			27		
	Actual Score		14			7			13		
	% of Maximum		52%			26%			48%		

PERFORMANCE DIMENSION III : LEARNING ENVIRONMENT
TEACHING/LEARNING COMPONENT III.A : PSYCHOSOCIAL LEARNING ENVIRONMENT

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Establishes a classroom climate of courtesy and respect.	+	+	+	-	+	+	+	+	+
2.	Warmth and friendliness are demonstrated throughout the lesson.	+	+	+	+	+	+	+	+	+
3.	Comments to or about students are free of sarcasm, ridicule, and derogatory, demeaning or humiliating references.	+	+	+	+	+	+	+	+	+
4.	Enthusiasm for teaching, learning and the subject being taught is communicated to students.	-	-	-	-	-	-	-	-	-
5.	Comments, questions, examples, demonstrations and/or other contributions are sought from students throughout the lesson.	-	+	+	-	-	-	+	-	+
6.	Considers, recognizes and/or comments on students contributions.	-	+	+	-	+	-	+	-	+
7.	Teachers' responses are sufficient to address students' questions and comments.	+	+	+	-	-	-	+	-	+
8.	Manages incorrect responses in a way that maintains students' dignity **or** there were no incorrect responses.	+	+	+	+	+	+	+	+	+
9.	Shows patience, empathy or understanding for students who respond poorly or who have difficulty **or** no students have difficulty.	+	+	+	+	+	-	+	+	-

10.	The lesson is personalized for students.	-	+	+		-	-	-		-	+	+
11.	Is fair and impartial in dealing with students.	+	+	+		-	+	-		-	-	+
12.	Students are given reasons for actions, decisions or directives made by the teacher as needed.	+	+	+		-	+	-		+	-	+
	Maximum Score		36				36				36	
	Actual Score		30				16				25	
	% of Maximum		83%				44%				69%	

TEACHING/LEARNING COMPONENT III.B : PHYSICAL LEARNING ENVIRONMENT

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The classroom is neat, safe and arranged an orderly manner.	+	+	+	+	+	-	+	+	+
2.	Display(s) create a pleasant atmosphere and serve a thematic/content-related purpose.	+	-	-	+	+	-	-	-	+
3.	The functional elements of the learning environment are arranged to effectively implement learning activities.	+	+	+	+	-	-	+	+	+
4.	Arranges the functional elements of the learning environment to accommodate students with special needs **or** there are no students with special needs.	+	+	+	+	+	+	+	+	-
	Maximum Score		12			12			12	
	Actual Score		10			8			9	
	% of Maximum		83%			67%			75%	

PERFORMANCE DIMENSION IV : ENHANCEMENT OF LEARNING
TEACHING/LEARNING COMPONENT IV.A : LESSON AND ACTIVITIES INITIATION

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Student attention is ensured before directions and explanations for learning activities are provided **or** students are attending.	+	+	-	-	+	-	-	-	+
2. Activities are initiated with motivating introductions which are content related.	-	-	-	-	+	-	+	-	-
3. Clearly communicates specific learning outcomes to students.	-	-	-	-	-	-	+	-	-
4. The purpose and importance of learning activities are communicated to students.	-	-	-	-	-	-	-	-	-
5. Procedural directions necessary to implement learning tasks are clear and complete.	-	-	-	-	-	-	+	+	+
6. Expectations about student engagement in learning tasks are communicated at the beginning of activities.	-	-	-	-	-	-	-	-	-
7. Clearly communicates the challenge of learning task(s) to students as needed.	-	-	-	-	-	-	-	-	-
8. Encourages all students to participate.	-	-	+	-	-	-	+	-	+
9. Reviews past learning to ensure student's readiness for new learning as needed.	-	+	+	-	-	-	-	-	+
10. As new ideas/concepts/ activities are introduced, they are related to past and future learning.	-	-	-	-	-	-	-	-	+

Maximum Score	30	30	30
Actual Score	5	2	10
% of Maximum	17%	6%	33%

TEACHING/LEARNING COMPONENT IV.B : TEACHING METHODS AND LEARNING TASKS

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Use of methods is appropriate for the complexity of lesson content.	+	+	+	+	+	+	+	+	-
2.	Teaching methods and learning tasks or topics within an activity are sequenced in a logical order.	+	+	+	+	+	-	+	+	+
3.	Uses two or more methods that enhance student interest and actively involve students in learning tasks.	-	+	+	-	-	-	+	-	-
4.	The teacher and the students interact in more than one group size.	+	+	+	-	+	-	-	+	+
5.	Methods and learning tasks used enhance mastery of learning objectives.	-	-	+	-	-	-	+	-	-
6.	Provision is made for lesson/activities closures.	-	+	+	-	-	-	-	-	-
	Maximum Score		18			18			18	
	Actual Score		14			6			11	
	% of Maximum		78%			33%			61%	

TEACHING/LEARNING COMPONENT IV.C : AIDS AND MATERIALS

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	The use of teaching aids is appropriate for methods and objectives.	-	-	+	-	+	+	-	+	+
2.	Teaching aids are used properly and accommodate the range of student needs and abilities.	-	-	+	-	+	-	-	-	+
3.	Teaching aids are used at appropriate times in the lesson.	-	-	+	-	-	-	-	+	+
4.	The use of teaching aids broadens understandings and enhances learning.	-	-	+	-	+	-	-	-	+
5.	The use of learning materials is appropriate for learning tasks and objectives.	-	-	+	+	+	+	+	-	-
6.	Learning materials are used properly and accommodate the range of needs and abilities of students.	-	-	+	-	-	-	+	-	-
7.	Learning materials are used at appropriate times in the lesson.	-	+	+	+	-	-	+	-	-
8.	Use of learning materials broadens student understandings and enhances learning.	-	-	+	-	-	+	+	-	-
	Maximum Score		24			24			24	
	Actual Score		9			9			10	
	% of Maximum		38%			38%			42%	

TEACHING/LEARNING COMPONENT IV.D : CONTENT ACCURACY AND EMPHASIS

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Students are given opportunities to learn at more than one cognitive and/or performance level.	-	+	+	-	-	-	+	+	-
2. Emphasizes the value and importance of topics and activities.	-	-	-	-	-	-	-	-	+
3. Content knowledge is accurate and up-to-date.	-	+	+	-	+	-	+	-	+
4. Content knowledge is logical.	-	+	+	-	+	-	-	+	+
5. Directions and explanations related to lesson content and/or learning tasks are effective.	-	-	-	-	-	-	-	+	+
6. Essential elements of content knowledge and/or performance tasks are emphasized.	-	-	-	-	-	-	-	-	-
7. Potential areas or points of difficulty are emphasized throughout the lesson.	-	-	-	-	-	-	-	-	-
Maximum Score		21			21			21	
Actual Score		6			2			9	
% of Maximum		29%			10%			43%	

TEACHING/LEARNING COMPONENT IV.E : THINKING SKILL

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Associations are taught and used in learning.	-	-	+	-	-	-	+	-	-
2.	Involves students in developing concepts.	-	-	+	-	-	-	-	-	+
3.	Involves students in developing principles and/or rules.	-	-	-	-	-	-	-	-	-
4.	Encourages students to think of and recall examples from their own experiences.	-	-	-	-	+	-	+	-	+
5.	Encourages students to use mental imagery.	-	+	-	-	+	-	+	-	-
6.	Asks a variety of questions.	-	-	-	-	-	-	-	-	-
7.	Wait time is used to enhance student learning.	-	-	-	-	-	-	-	-	+
8.	Encourages critical analysis and/or problem solving.	-	-	-	-	-	-	+	-	+
9.	Encourages student sot elaborate, extend or critique their own or other students' responses.	-	-	-	-	-	-	+	-	-
10.	Encourages creative thinking.	-	+	-	-	-	-	+	-	-
11.	Provides opportunities for the extension of learning to new contexts.	-	-	+	-	+	-	-	-	-
	Maximum Score		33			33			33	
	Actual Score		5			3			10	
	% of Maximum .		15%			9%			30%	

TEACHING/LEARNING COMPONENT IV.F : CLARIFICATION

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Areas of misunderstanding or difficulty are identified before students ask questions **or** no misunderstanding or difficulty occurs.	+	+	+	-	-	-	-	-	+
2.	Different words or examples are used in clarification **or** no clarification is needed.	+	+	+	-	-	-	+	-	+
3.	Bases for learner difficulties or misunderstandings are sought **or** no misunderstandings or difficulties occur **or** probing is not necessary.	+	+	+	-	-	-	-	-	+
4.	Clarifications are made for individuals or small groups rather than for the entire class **or** this type f clarification is not necessary.	+	+	+	-	+	+	+	+	+
5.	Attempts to eliminate misunderstanding are successful **or** no misunderstanding occurs.	+	-	+	-	-	-	-	+	+
	Maximum Score		15			15			15	
	Actual Score		14			2			9	
	% of Maximum		93%			13%			60%	

TEACHING/LEARNING COMPONENT IV.G : PACE

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Learning activities are implemented at an appropriate pace.	+	-	+	-	+	+	-	-	-
2. Summarizes or reviews during the lesson to monitor/assess the pace of teaching and learning.	-	-	+	-	-	-	-	-	-
3. Provides sufficient time of students to complete learning task(s).	+	-	+	+	-	+	-	-	-
Maximum Score		9			9			9	
Actual Score		5			4			0	
% of Maximum		55%			44%			0%	

TEACHING/LEARNING COMPONENT IV.H : MONITORING LEARNING TASKS AND INFORMAL ASSESSMENT

ASSESSMENT INDICATOR	Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
	1	2	3	1	2	3	1	2	3
1. Monitors students initial engagement in learning tasks.	-	+	+	-	-	-	-	-	+
2. Monitors students' engagement during learning tasks.	-	-	+	-	-	-	-	-	-
3. Monitors the completion of learning tasks.	-	-	+	-	-	-	+	-	-
4. Solicits a range of responses from students for informal assessment purposes.	-	+	+	-	+	-	+	-	-
5. A variety of levels of learning is assessed as appropriate.	-	+	+	-	-	-	+	-	-
6. Adjustments within the lesson are made as needed **or** no adjustments are necessary.	-	-	+	-	+	-	-	-	-
Maximum Score		18			18			18	
Actual Score		9			2			4	
% of Maximum		50%			11%			22%	

TEACHING/LEARNING COMPONENT IV.I : FEEDBACK

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Provides specific feedback to students about responses which are adequate and inadequate.	-	-	-	-	+	-	-	-	+
2.	Suggestions for improving performance are provided to students **or** none are needed.	-	-	-	-	+	-	+	-	-
3.	Revisits students who have responded inadequately.	-	-	-	-	-	-	-	-	-
4.	Provides specific feedback to students when they have mastered learning objective(s).	-	-	-	-	-	-	-	-	-
	Maximum Score		12			12			12	
	Actual Score		0			2			3	
	% of Maximum		0%			17%			25%	

TEACHING/LEARNING COMPONENT IV.J : ORAL AND WRITTEN COMMUNICATION

ASSESSMENT INDICATOR		Janet Assessment Decision			Millie Assessment Decision			Candy Assessment Decision		
		1	2	3	1	2	3	1	2	3
1.	Written language used in lesson presentation is accurate.	+	+	+	+	+	+	+	+	+
2.	Oral language used in lesson presentation is accurate and easy to understand.	+	+	+	+	+	+	+	+	+
3.	Uses appropriate vocabulary in oral and written language.	+	+	+	+	+	-	+	+	+
4.	Communication is precise with few false starts, interrupters or inappropriate qualifiers.	+	+	+	+	+	+	+	+	+
	Maximum Score		12			12			12	
	Actual Score		12			11			12	
	% of Maximum		100			92%			100	

APPENDIX A

S T A R

System for Teaching and Learning Assessment and Review

PERFORMANCE DIMENSION I: PREPARATION, PLANNING AND EVALUATION (32)a

TEACHING AND LEARNING COMPONENTS

A. Goals and Objectives (6)b
B. Teaching Methods and Learning Tasks (6)
C. Allocated Time and Content Coverage (4)
D. Aids and Materials (5)
E. Homework (4)
F. Formal Assessment and Evaluation (7)

PERFORMANCE DIMENSION II: CLASSROOM AND BEHAVIOR MANAGEMENT (28)

TEACHING AND LEARNING COMPONENTS

A. Time (8)
B. Classroom Routines (4)
C. Student Engagement (1)
D. Managing Task-Related Behavior (6)
E. Monitoring and Maintaining Student Behavior (9)

PERFORMANCE DIMENSION III: LEARNING ENVIRONMENT (16)

TEACHING AND LEARNING COMPONENTS

A. Psychosocial Learning Environment (12)
B. Physical Learning Environment (4)

PERFORMANCE DIMENSION IV: ENHANCEMENT OF LEARNING (64)

TEACHING AND LEARNING COMPONENTS

A. Lesson and Activities Initiation (10)
B. Teaching Methods (6)
C. Aids and Materials (8)
D. Content Accuracy and Emphasis (7)
E. Thinking Skills (11)
F. Clarification (5)
G. Pace (3)
H. Monitoring Learning Tasks and Informal Assessment (6)
I. Feedback (4)
J. Oral and Written Communication (4)

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a Number of Assessment Indicators Comprising Performance Dimension

b Number of Assessment Indicators Comprising Teaching and Learning Component

PERFORMANCE DIMENSION II: CLASSROOM AND BEHAVIOR MANAGEMENT

Effective classroom and behavior management comprise a necessary element of effective teaching performance. Clearly communicated and well-established behavioral expectations and fair and consistent consequences facilitate effective and efficient monitoring and maintenance of acceptable student behavior. Students' active engagement in learning tasks, a strong correlate of student achievement is maximized through stimulus variation and redirecting and revisiting students who are "off task". Appropriate learning activities should be provided for "early finishers" to maximize learning time and student engagement in learning tasks. Time for learning is further maximized by initiating teaching and learning activities promptly, implementing transitions without delays, efficiently handling routine tasks and avoiding undesirable digressions from topics or learning activities.

TEACHING AND LEARNING COMPONENTS

II.A. Time

II.B Classroom Routines

II.C. Student Engagement

II.D. Managing Task-Related Behavior

II.E. Monitoring and Maintaining Student Behavior

TEACHING AND LEARNING COMPONENT II.A: TIME

COMMENTS: Teaching and learning activities reasonably reflect allocated time, begin promptly, proceed efficiently with smooth transitions and no undesirable digressions and allow for maximum opportunities for student engagement in learning. "Activity" refers to all things teachers and students do in the classroom.

RESEARCH BASE

Research in classroom management suggests that effective use of time involves effective management of classroom activities. Brophy and Evertson (1976) found strong and consistent positive relationships between student engagement in tasks and learning gains. Similarly, in a study by Evertson, et al. (1980), positive correlations were found between effective management skills and teacher control (teacher's use of time) and student achievement. According to Scott and Bushell (1974), teaching and learning time is most effectively utilized when teachers spend minimal amounts of time helping individual students. Arlin (1979) has found that teacher use of structured transitions (e.g., giving students procedural directions, establishing transition routines) results in a decrease in unnecessary delays in teaching and learning. Additionally, there are several recent studies which lend further support to the notion that teachers who are efficient classroom managers maximize student engagement time by minimizing organization and transition time during lessons (Coker, Medley and Soar, 1980; Fisher et al. 1980; Good and Grouws, 1979; Stallings, Cory, et al. 1977).

TEACHING AND LEARNING COMPONENT II.A: TIME

ASSESSMENT INDICATORS	ANNOTATION	NOTES/CLARIFICATION
II.A.1 Learning activities begin promptly	This indicator focuses on the *beginning of the lesson.* Learning activities should begin with little time spent on organizational activities such as roll taking and distributing materials and supplies. The efficiency with which organizational activities are handled is always a concern. IF A SIGNIFICANT AMOUNT OF TIME IS WASTED AT THE BEGINNING OF THE LESSON, THE INITIAL USE OF TIME IS UNACCEPTABLE.	
II.A.2 Expectations for maintaining and completing timelines for tasks are communicated to students.	As initial tasks begin and as tasks change throughout the lesson, the teacher should clearly communicate to students when tasks are to be completed. Cautions about wasting time and informing students about the persistence needed to complete tasks on time are elements of effective communication of expectations. IF THE TEACHER DOES NOT ADEQUATELY COMMUNICATE THESE EXPECTATIONS TO STUDENTS, THE USE OF TIME AVAILABLE FOR LEARNING IS UNACCEPTABLE.	

Student Teacher Interview Questions

1. You identified _____ as the subject you have the best preparation in. I want to find out why you feel confident in _____.

   a. What subject matter knowledge does a 3rd grade teacher need to teach an effective _____ unit?

   b. Where and when did you get this knowledge?

   c. What experiences do you have that will allow you to teach an effective _____ unit?

   d. Where and when did you gain these experiences?

   e. What in your background (e.g. during elementary and secondary school) prepared you for teaching _____?

   f. Describe an ideal _____ class for third grade.

2. Consider your best students in _____, what distinguishes them from your other students?

3. Consider the best _____ you have had. What distinguishes him/her from your other _____ teachers?

4. What do you want your students to be thinking about when they are _____ _____?

Student Teacher Pre-Observation Interview

1. On what basis did you select the content and the activities in your unit?
2. Where did your ideas for the unit originate from?
3. What helped you the most in developing your unit?
4. What resources did you use in planning? How were you aware of those resources available to you?
5. Tell me more about your goals for the lesson. What difference do you see in goals and objectives?
6. Would you explain what kind of information about your students you may have used to develop instructional objectives?
7. What competencies should your students have to accomplish your goals?
8. What background knowledge do the students need in order to be successful in mastering your objectives?
9. If you have students who are below level and some achievers, how will you accommodate those individuals?
10. In this unit, what are the essential elements that you intend to emphasize?
11. What do you anticipate students to have difficulty with? How will you go about clarifying the misunderstanding and confusion?
12. How does this unit of study equip students for continued learning in _____?
13. Could the activities planned be sequenced in any other way? Why?
14. In your unit, what kinds of objectives should students have mastered before _____? What type objectives would follow this unit of learning?
15. How might you have broken your objectives into sub-parts? How much time should you spend on each sub-part?
16. How do these activities accomplish your objectives?

Student Interview

1. What did your teacher want you to learn today?
2. What was the most important thing your teacher wanted you to learn?
3. Why is it important for you to learn x x x x x x x x ?
4. How did your teacher get you interested in the lesson today?
5. What did the teacher do to make you want to participate today?
6. Do you think you were successful today? How did you know you were successful?
7. What did your teacher do or say that helped you the most to be successful today?
8. Were you confused about what to do during the lesson? When and why were you confused?
9. How did the teacher help you understand what you were confused about?
10. What did the teacher want you to think about today during the lesson?
11. What did the teacher teach today you had already learned before?
12. If you were the teacher, how would you have taught this lesson?